700 Road Forest Habitat Restoration Project
Summary of Proposed Changes
January 26, 2005

As a result of the Forest Restoration Workshop (7/18/04), comments received from environmental organizations and the public, and further review by SPU staff, the following changes have been made to the prescriptions in the 700 Road Forest Habitat Restoration Project Plan (*with a brief explanation in parentheses, italics*). This is a brief summary only. Please refer to the updated draft plan for complete details about this project.

1. ***Reduce area to be ecologically thinned*** by 34 acres*.* (*To better address areas of highest priority for thinning and designate additional "reserve" areas.*)
2. ***Reduce number of acres where some trees will be yarded*** from 395 to a maximum of 276 acres by creating units where all thinned trees will be left on the forest floor and adding 5% of the area in unthinned skip patches. Note: some areas may be logistically impossible to yard trees out of, given the ground disturbance restrictions, so actual acreage yarded may be less than 276 acres. *(To simulate small to medium scale disturbances and provide a large pulse of down wood in targeted areas*.)
3. ***Decommission the ridge road*** at the conclusion of the project, which will involve breaking up the compacted surface, re-contouring where appropriate, and planting with native vegetation. One logistical option is to use this old road as a forwarding corridor and base for uphill yarding, which can be done with no modification of the existing road. Uphill yarding has several advantages over downhill yarding, including much less ground disturbance, less damage to adjacent trees, narrower yarding corridors, and greater worker safety. In addition, equipment that could be used to decommission the road would already be on site, adding a cost efficiency to the project. (*This road is extremely compacted and has very little vegetation growth after 70 years. Decommissioning the road will allow the forest to recover naturally.*)
4. ***Create numerous variably-shaped small gaps and skips*** (approximately 50 ft diameter or 0.04 ac) in units E1-E8 and RT to bring total area in gaps and skips to at least 10% of each unit – 5% in gaps and 5% in skips. Note: The area in the larger gaps and skips in E1, E2, and E8 will count toward the 10% total. (*To increase structural complexity with persistent gaps and denser unthinned patches. The gap size chosen was slightly larger than the crown diameter of the large dominant trees on the site to ensure persistence of the gap*.)
5. ***Create Unit E9 at the top of the ridge*** (36 ac) because of the unique landscape position and the different forest characteristics present in that area. Thin only 30% of the basal area because of the risk of windthrow at the top of the ridge. Thinning pool = 9-16" western hemlock and Douglas-fir. Snag pool = 15-19" western hemlock and Douglas-fir. Target larger dominant trees to thin around, to further enhance their growing space and accelerate their diameter and branch development. (*Provide more growing space to dominant and existing understory trees and shrub. Provide larger diameter snags for species such as pileated woodpecker. Provide larger diameter trees with larger branches as nesting platforms for species such as marbled murrelet.*)
6. ***Add variable sized skips around existing unique habitat features***, such as patches of larger diameter trees, swales, deciduous trees, etc. in Units E1, E2, E6, E8, and E9 (*To protect unique habitat features from any disturbance during the thinning operation.*)

7. **E1**: Delete 34 acres and put into Leave Areas 4 and 5. Split the remaining 46 acres into 3 subunits, all with the same prescription. Drop the basal area target from 35% to 30%. Delete Douglas-fir from the thinning and snag pool. Delete 17" western red cedar from thinning and snag pool. Add 8-12" Pacific silver fir to the thinning pool. Change the snag pool to 15-19" western hemlock only. In addition to already marked larger gaps (total of 1.5 ac) and skips (total of 1.5 ac) create approximately twenty 0.04ac gaps and leave untreated twenty 0.04ac skips, scattered throughout the units (approximately one small gap and skip every 1.3 acres). Ground based equipment and cable yarding to 700 Road. (*Upon further review, the planning team decided that the area closest to the river was not a high priority for thinning. The new prescription is based on the data for the residual areas in E1. All Douglas-fir was left unthinned because of its relatively low density in these subunits, to maintain that shade-intolerant species component. To increase structural complexity with persistent gaps and denser unthinned patches.*)

8. **E2**: Delete 17" Douglas-fir from thinning and snag pool. Add 16" western hemlock to thinning and snag pool. In addition to already marked larger gaps (total of 2.75acres) and skips (total of 2.75 acres), create approximately forty-six 0.04ac gaps and leave untreated forty-six 0.04ac skips, scattered throughout the unit (approximately one small gap and skip every 2 acres). Ground-based equipment only. (*To further target the most prevalent tree species and therefore increase the relative proportion of other tree species after thinning. To increase structural complexity with persistent gaps and denser unthinned patches.*)

9. **E3:** Delete 6 acres near top and toe of ridge and add to E9, reducing unit from 47 to 41 acres. Delete all western red cedar and Pacific silver fir from thinning pool. Change snag pool from 17-33" western hemlock, Douglas-fir, western red cedar and Pacific silver fir to 17-20" western hemlock and Douglas-fir. Reduce number of snags created from 12 to 11. Create approximately fifty-one 0.04ac gaps and leave untreated fifty-one 0.04ac skips scattered throughout the unit (approximately one small gap and skip every 0.8 acres). Likely will cable yard to the existing ridge road. (*To preserve all existing larger trees in this unit for future forest development, increase structural complexity with persistent gaps and denser unthinned patches, and preserve existing western red cedar and Pacific silver fir for vertical structure. This prescription should still allow us to test the hypothesis that creating large numbers of snags will simulate a "thin from above", which will add much more light to the forest floor, allowing better understory development.*)

10. **E4**: Delete 4 acres near top and toe of ridge and add to E9, reducing unit from 21 to 17 acres. Remove 10" western red cedar and 14-15" Douglar-fir from thinning and snag pool. Create approximately twenty-one 0.04ac gaps and leave untreated twenty-one 0.04ac skips scattered throughout the unit (approximately one small gap and skip every 0.8 acres). Likely will cable yard to the existing ridge road. (*To target for thinning the most prevalent tree species, preserve existing understory cedar for vertical structure, and increase structural complexity with persistent gaps and denser unthinned patches.*)

11. **E5:** Delete 12 acres near the top of the ridge and add to E9, reducing unit from 36 acres to 24 acres. Add 12-14" western hemlock and delete 19" Douglas-fir from the thinning pool. Create approximately 30 0.04ac gaps and leave untreated 30 0.04ac skips scattered throughout the unit (approximately 1 small gap and skip every 0.8 acres). Likely will cable yard to the existing ridge road. (*To target the most prevalent tree species for thinning and increase structural complexity with persistent gaps and denser unthinned patches.*)

12. ***E6***. Delete 14 acres near the top of the ridge and add to E9, reducing unit from 85 to 71 acres. Remove all western red cedar, delete 17" Douglas fir, and add 15-16" western hemlock to the thinning pool. Create approximately eighty-nine 0.04ac gaps and leave untreated eighty-nine 0.04ac skips scattered throughout the unit (approximately one small gap and skip every 0.8 acres). The eastern 2/3 of the unit (the area east of the ephemeral stream) will have all thinned trees left in place on the forest floor. Likely will cable yard the western portion of the unit to the existing ridge road. (*To preserve all existing understory trees for vertical structure, target the most prevalent tree species for thinning, increase structural complexity with persistent gaps and denser unthinned patches. To provide a large pulse of down wood for habitat for small mammals and soil development and to monitor the effects on understory vegetation.)*

13. ***E7***: Change prescription to cutting in small gaps only, with no trees yarded and no general matrix thin. Fifteen percent of the area (total of 2.85 acres) will be cut in a range of small (0.04-0.25 ac) variably shaped gaps scattered throughout the unit. Gap locations will be selected to avoid inclusion of trees not in the thinning pool. No western red cedar will be cut. Snag pool is 10-13" western hemlock and Douglas-fir. (*To simulate a small-scale disturbance, providing over 1,200 down trees for soil development and habitat for small mammals, and create greater structural complexity that will persist long-term*.)

14. ***E8***: Delete 3 acres and finalize unit boundaries at 12 acres. Change prescription to 25% basal area thinning from a thinning pool of 6-15" western hemlock and 10" Douglas-fir. Create 4 snags/ac from 15-16" western hemlock. In addition to existing ¼ acre gap and skip, create approximately nine 0.04ac gaps and leave untreated nine 0.04ac skips scattered throughout the unit (approximately one small gap and skip every 1.3 acres). Ground based equipment only. (*Increase structural complexity with persistent gaps and denser unthinned patches*.)

15. ***RT:*** Create approximately seventeen 0.04ac gaps and leave untreated seventeen 0.04ac skips scattered throughout the unit (approximately one small gap and skip every 0.8 acres) in addition to thinning.